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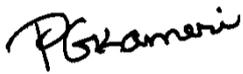
21 January 2022

Dear Mr. de Serpa Soares,

Thank you for your letter dated 14 December 2021 inviting the United Nations Environment Programme (UNEP) to contribute to the Report of the Secretary-General on the topic of “Ocean Observing,” for the Twenty-Second meeting of the United Nations Open-ended Informal Consultative Process on Oceans and Law of the Sea, to be held from 6 to 10 June 2022.

I am pleased to share with you the contribution of UNEP on the topic of “Ocean Observing,” which is enclosed. We greatly appreciate the opportunity to assist the Division for Ocean Affairs and Law of the Sea of the Office of Legal Affairs in the consideration of this topic.

Yours sincerely,



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Contribution of the United Nations Environment Programme to the report on the topic of “Ocean Observing” for the twenty-second meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea

UNEP activities, tools and existing contributions to science-based decision-making related to “Ocean Observing”.

1. The Global Environment Monitoring System for the Ocean and Coasts (GEMS Ocean) Programme

The Global Environment Monitoring System for the Ocean and Coasts Programme (GEMS Ocean) aims to support sustainable management, inform States of trends of the marine and coastal environment, and initiate downstream action and transformation based on data collected. It is designed to build on the information and analysis of existing monitoring efforts at national, regional, and global levels, including efforts collected through Multilateral Environmental Agreements (MEAs), the Sustainable Development Goals, and the United Nations and the Earth observation, monitoring, and modelling community. To this end GEMS Ocean utilizes UNEP’s World Environment Situation Room¹ (WESR) platform and other relevant partner portals to display data and data analytics. The goal is to provide and showcase individual case-level narratives, including examples that illustrate nature-based solutions efforts, to ultimately inform relevant stakeholders across all sectors.

UNEP recognizes that the challenge lies in compiling, synthesizing and analyzing output data and information from the multiple ocean monitoring and observation systems worldwide in order to have knowledge and services at hand that can be operationalized and help priorities targeted actions. The main objective of GEMS Ocean is therefore not primarily to generate new data on its own but to coherently use and translate data through contextualizing and synthesizing information from existing data streams. To achieve this, it is of the utmost importance to avoid any duplication of existing monitoring initiatives. Therefore, stakeholder engagement will be a cornerstone for bottom-up codesign of GEMS Ocean. Internal and external partners have been identified and engaged by GEMS Ocean. Leveraging existing data and information on the user side will be critical to delivering an end-to-end value chain of services. This supports action toward a sustainable blue economy transformation, and to respond to challenges related to climate change, ecosystem degradation and pollution. Ultimately, with the outputs of GEMS Ocean and coordinated action with people concerned at their relevant scale, a localized 2030 Agenda can be informed.

GEMS Ocean is envisioned to focus on the following, based upon the framing of UN strategies²:

¹ UNEP World Environment Situation Room, Data Information and Knowledge on the Environment, <https://wesr.unep.org/article/ocean-seas-and-coasts>.

² See the UN Decade of Ocean Science for Sustainable Development, <https://www.oceandecade.org/>; UNEP Medium-Term Strategy (MTS) 2022-2025, <https://wedocs.unep.org/bitstream/handle/20.500.11822/35162/Doc3%20Reve1%20EnglishK2100501.pdf?sequence=1&isAllowed=y>; and the UN Secretary General’s Data Strategy, <https://www.un.org/en/content/datastrategy/index.shtml>

- Embrace Essential Ocean Variables (EOVs) and include the analysis of information about stocks and flows of natural capital assets to inform concepts such as Sustainable Blue Economy (SBE) and Marine Spatial Planning (MSP);
- Provide information about social capital and land-sea interactions implications especially for communities that depend on coastal and ocean ecosystem health in tackling climate mitigation and adaptation in coastal land and seascapes;
- Translate the collective ocean knowledge and expertise from a multiplicity of data and information including non-traditional sources and indigenous knowledge into sustained, targeted information for decision-makers.

Additionally, three strategic goals have been identified for the GEMS Ocean Programme³:

- Goal 1: GEMS Ocean promotes and convenes a transdisciplinary partnership approach including UN and civil society partners, data providers, observing systems and knowledge asset holders to translate the collective ocean and coastal knowledge and expertise into sustained, targeted information for decision-makers, and to trigger transformative action at scale. Its priority focus is on sustainable coastal and ocean use and ecosystem health as well as informing sustainable blue economy developments by considering dynamic interactions of the land-sea interface.
- Goal 2: GEMS Ocean strengthens capacity development on key aspects of ocean monitoring, including data management, quality assurance and information sharing, digital capacities and citizen science, especially at regional and national level with special focus on the Regional Seas and other relevant MEAs and responds to country demands while providing feedback to on-going and future Global Assessments and the relevant SDGs (notably SDG 14 and those closely interlinked, such as SDG 6).
- Goal 3: GEMS Ocean provides access to and supports the use of quality assured, interoperable, open environmental data, analysis and sets of indicators to governments and stakeholders.

2. Ocean+

Ocean+ is contributing to reporting on ocean observation for decision-making in a variety of ways. The Ocean Data Viewer⁴ offers spatial data that can be used for decision-making, most importantly through the global distribution of habitats datasets which can be freely downloaded and used for analyses, reports, and other outputs. Examples of habitats datasets⁵ include the Global Distribution of Coral Reefs which provided the basis for the Sixth Status of Corals of the World report, and the Global Mangrove Watch data which is used as an official indicator for SDG 6.6.1.

Ocean+ uses spatial data to provide statistics for decision-making on the status of five key marine habitats of interest: warm-water corals, cold-water corals, mangroves, seagrasses and saltmarshes. It brings together data from the Ocean Data Viewer, Protected Planet⁶, and the IUCN Red List, to share national-level statistics on key

³ Sustainability Research and Innovation Congress (SRI2021)

⁴ <https://data.unep-wcmc.org/>

⁵ <https://habitats.oceanplus.org/>

⁶ <https://www.protectedplanet.net/en>

monitoring points, including how much of a country's coastline is covered by these habitats, how much of the habitats is covered by protected and conserved areas, how many habitat-building species of each IUCN Red List category are present in every countries, and change over time to the habitat's extent. The last set of national-level statistics is currently only available for the habitats of mangroves, but UNEP IS working to add time series data for other habitats.

3. Global Ocean Asset Data Inventory for Ocean Accounting

UNEP World Conservation Monitoring Center (UNEP-WCMC) supports the Global Ocean Accounts Partnership⁷ by compiling a Global Ocean Asset Data Inventory for Ocean Accounting (the Inventory). The Inventory will update the original OCEAN ACCOUNTS Global Ocean Data Inventory published by the UN ESCAP Statistics Division in 2019⁸.

Ocean accounts can support science-based decision making by providing regular information on the state of the ocean environment and the interactions between ocean ecosystems and economies and societies. As such, ocean accounts can be an important tool for informing policy and development decisions and tracking progress against biodiversity⁹ and sustainable development goals. Many countries are prioritizing compilation of global ocean asset accounts as a starting point for compiling national ocean accounts. Where national data gaps exist, global ocean asset data may help enable the development and pilot testing of national ocean asset accounts. These pilot ocean accounts play an important role in demonstrating the utility of ocean accounts to inform sustainable ocean policy decisions and help make the case for investments in ocean ecosystem restoration, conservation and observation.

⁷ <https://www.oceanaccounts.org/goap-in-brief/>

⁸ <https://www.unescap.org/events/global-dialogue-ocean-accounting-and-first-annual-meeting-global-ocean-accounts-partnership>

⁹ <https://www.unbiodiversitylab.org/>